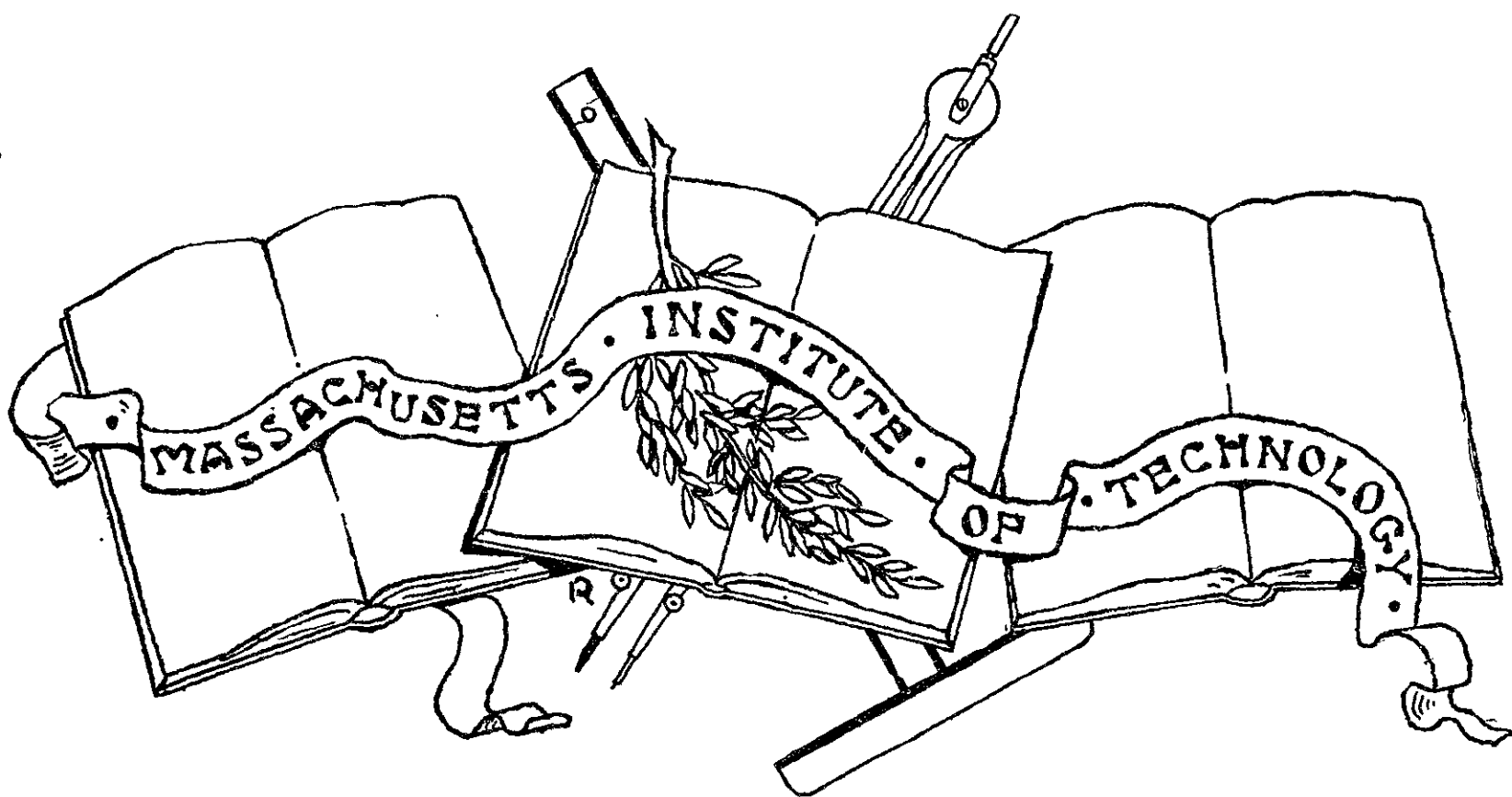
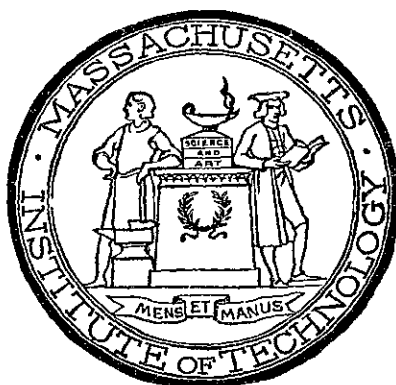


THE TECH



BOSTON, MASS.

VOLUME XVI.

NUMBER 28.

MAY 6, 1897.



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THE TECH

VOL. XVI.

BOSTON, MAY 6, 1897.

NO. 28

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Published every Thursday, during the college year, by students of the Massachusetts Institute of Technology.

CHARLES-EDWARD AMORY WINSLOW, '98, *Editor in Chief*.
CLARENCE RENSHAW, '99, *Assistant Editor in Chief*.
THOMAS EDDY TALLMADGE, '98, *Secretary*.
HARRY DRAPER HUNT, '97.
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W. R. STRICKLAND, '98, *Business Manager*.
E. R. SHEAK, '99, *Ass't Business Manager*.

Subscription, \$2.50 per year, in advance. Single copies, 10 cts. each.

For the benefit of students THE TECH will be pleased to answer all questions and obtain all possible information pertaining to any department of the College.

Contributions are requested from all undergraduates, alumni, and officers of instruction. No anonymous manuscript can be accepted.

Frank Wood, Printer, 352 Washington Street, Boston.

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CORNELL is about to have a series of "Campus Meetings," the aim of which will be to foster a stronger University spirit among the undergraduates. There will be music and singing of college songs by the Glee Club and student body at large. In addition prominent alumni and upper classmen will speak, and there will be cheering and marching about the college grounds.

First of all, the idea of these meetings is to bring the students together, and second, to arouse a wholesome enthusiasm for the college and its representatives in various lines of competition. What will be the success of the plan with the student body at large remains to be seen; but its projection shows an enterprising spirit and a genuine love for their college on the part of few men at least.

Some common meeting of the students is

what we need at Technology. There is plenty of loyalty here; in every field of undergraduate enterprise there are men ready and willing to sacrifice time and strength for the honor of the Institute. But this loyalty has no chance to expand, to spread from man to man by that subtle mysterious power of transmission which animates masses of men. Such a common meeting ground, such a source of inspiration to the students, the Technology Club might furnish; and we cannot feel that it is quite fulfilling its opportunities unless it does so. Why not throw open the Clubhouse one night in the month to the undergraduate body? Informal speaking by graduates with perhaps the singing of college songs would make such gatherings of inestimable value as a stimulus to Institute life.

IN another column we have announced the good news of honors won for Technology in the Beaux Arts Architectural competitions at New York.

This competition is, perhaps, the only opportunity for the world to make a direct comparison of the work done here at the Institute in a certain line, with that turned out by her rival professional institutions.

Our continued success in these architectural competitions is very significant; it not only shows the superiority of our work and methods in architecture, but also serves as a criterion of the excellence of the Institute work in all the professions, and we feel sure that if our engineers, our chemists, and biologists could be placed in direct competition in their respective professions with those of other institutions, their success would be not a whit less notable than that of our representatives from Course IV.

THE Lowell School of Practical Design connected with the Massachusetts Institute of Technology will close a very successful year May 28th. The school has for many years been one of the foremost of its kind in America, and thanks to the able instruction of Professor Kastner and his assistant, it still ranks among the very best. Designs made by pupils of the school have secured for it the medals at the Centennial International Exhibition in 1876, the World's Fair medal at Chicago in 1893, and three awards from the Mechanics Charitable Association Exhibits of 1874, '81, '95. Several designs for silk and wall paper have been sold by the pupils during the year, and a number of the students have obtained excellent positions.

CONSIDERING the extremely disagreeable weather the Class games last week were quite successful. The times made were very creditable for such a cold day, and the number of starters, except in the high hurdles and the quarter mile, encouraging. The mile and the two mile were both close finishes; Mayhew's time in the latter stands as the first record made by a 1900 man. The record in the shot was again broken, being now better by more than a foot and a half than de Bullet's record, which stood from '92 to the present year. Stebbins, as usual, showed excellent form, doing perhaps the best individual work of the afternoon.

Typical Theses.

COURSE III.

[Concentration Test upon a Galena Ore. By W. C. Potter and T. Washburn.]

ONE of the most important questions which a mining engineer is called upon to answer, is how to concentrate an ore most successfully and economically. Messrs. Potter and Washburn in their thesis have endeavored to carry out a system of close sizing, graded crushing, and graded jigging, assaying the product of

every step, to determine the amount of galena extracted in each operation.

The ore as it comes from the mine is first sized, sorted, that is by sieves of certain fixed meshes, and the per cent of ore in each size determined. Then the maximum size which can be successfully jigged (sorted by the action of water, the heavier refuse gangue minerals sinking to the bottom), is found by experiment, and all the ore is crushed approximately to this size and again sized. All coarse enough to treat on a jig is then jigged, and the tails or refuse recrushed, sized, and again jigged. The tails from this last operation form a waste product.

Meanwhile the finer size ore is treated in a hydraulic classifier, which sorts the material by allowing the heavier particles to sink against an upward current of water, while the lighter ones are carried along on the surface. The coarsest product of this operation is jigged and the finer particles go to a Frue Vanner where the final product is obtained by the sorting action of a thin stream of water flowing over a slowly moving, slightly inclined surface.

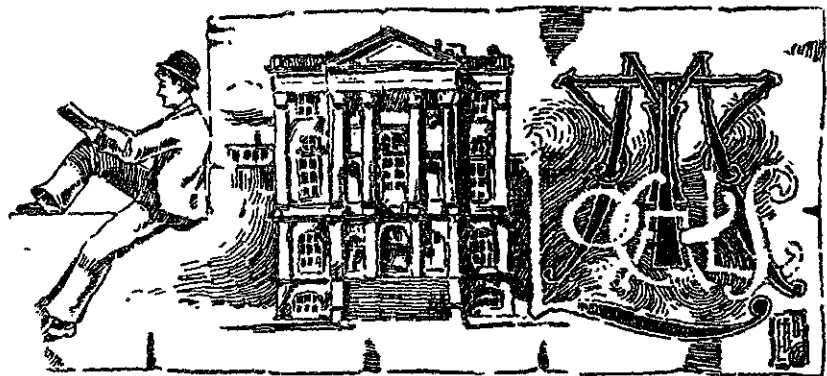
The results of the theses, when tabulated, will show at a glance how far it will pay to carry out the process.

COMMUNICATIONS.

The Editors do not hold themselves responsible for opinions expressed by correspondents.

TO THE EDITORS OF THE TECH:—

The Editors of the '98 "Technique" understand that a member of the instructing staff of the Institute feels himself aggrieved by a quotation referring to punning in the volume which appeared a fortnight ago. They regret deeply that such should be the case, for in quoting Dr. Johnson nothing could be farther removed from their minds than the intention of shocking one of the Institute's best and most popular instructors. At the same time they cannot but consider that the feeling in question is due more to the hypersensitiveness of the gentleman concerned than to any indiscretion on their part.



At the meeting of L'Avenir last Friday, Mr. Winslow read three monologues.

Resolutions on the death of President Walker have been received from the Class of '95.

The Physical Library has received a large number of standard volumes from Mr. W. O. Ross, M. I. T., '70.

The Salem Cadet Band will furnish the music at the Intercollegiate Drill on May 21. The Brown Band and the M. I. T. Field Music will play in the parades.

The Course in Dynamo Design, given this year by Mr. Derr, has been greatly extended beyond its scope in former years. Next year it will probably be still further lengthened.

Messrs. Pike and Knight have prepared an extensive apparatus for measuring the impact and velocity of the jet of water from an injector. It is expected that some interesting results will be obtained.

Some very interesting data on the stretch of ropes has been obtained from the tests which are a regular part of the work in the laboratory of Applied Mechanics. The results will be published in the *Technology Quarterly*.

The recent artistic competition for the '99 "Technique" has resulted in the choice of N. P. Rood (Editor), O. G. Vogt, and E. H. Hewitt. On Monday, C. Renshaw was elected Editor in Chief, and W. E. West, Associate Editor.

The Glee, Mandolin, and Banjo Clubs gave a concert in Natick, Mass., last Friday even-

ing. By the hospitality of the board of lady managers there, the clubs were served with a light collation after the concert, and then enjoyed a very informal dance.

The M. I. T. battalion on last Wednesday marched from the Armory down to the Park Square Station, and rehearsed the ceremonies attending the reception and escort of the Brown battalion. It was the first time the battalion has been out of doors.

The Drill Committee has placed the ushering of the next competitive drill in the hands of M. Davenport, and he has appointed the following men to act as head ushers: M. W. Hall, on the floor, S. C. Sears, on the balcony, and W. E. Rabbeth, on the stage.

A competition in poster designing is open to all Technology men. A poster is wanted for the Intercollegiate Drill, and the drawings must be submitted to C. T. Leeds, '00, "Cage," by May 14th. The first prize will be \$5; the second, two \$1 tickets to the drill.

R. W. Porter has an interesting paper in the *New England Magazine* for May on The Artistic Possibilities of Greenland. The article is profusely illustrated, in part, by reproductions of photographs taken by Mr. Porter while with the Peary expedition last summer.

The Yacht Club dinner takes place next Saturday at half past seven at Young's Hotel. In consequence of the fact that the great college race will not be rowed at New London this year, the Yacht Club will not make its cruise in June in order to take in the race, but will cruise in August, in company with the New York Yacht Club. Schedules will be made out at once.

At the annual meeting of the M. I. T. Co-operative Society last week, the following men were elected to hold office for the ensuing year: T. E. Tallmadge, '98, President; G. C. Winslow, '99, Vice President and Manager; M. Davenport, '00, Secretary; A. D. Maclachlan, '96, Treasurer. The Directors

reported the names of many new tradesmen, several of whom were admitted to the Society lists. It is the aim of the Society to have two tradesmen in each branch of business.

A very interesting exhibition in broadsword and fencing was given at the Posse Gymnasium last week. Some very clever fencing was done by the young ladies as well as by the gentlemen of the class. It is to be regretted that more interest is not taken in fencing at Technology. It is hoped, however, that interest enough will be shown next year to make it possible to form a fencing club here early in the fall under the direction of Instructor Boos.

Forty-four bicycle stands, similar to those at Rogers, have been placed in front of the Walker Building. With the increasing popularity of the wheel among students who live at a distance from the Institute, it will not be surprising if even more stands are needed in the near future in order to accommodate every one. If more stands are put up, it is to be hoped that a little more forethought will be shown than that displayed last week. At least four of the present stands were placed in angles where they are absolutely useless, and two or three others can be used only with great inconvenience when the other stands are full.

Friday afternoon, April 23, a party of the Industrial Chemistry division visited the Malden-Melrose Gaslight Company's works at Malden. The party was under the guidance of Mr. Chas. D. Jenkins, who lectured to the class the previous week, but included also Instructors Thorp, Smith, and Gill of the department. The making and purification of the constituents of illuminating gas was witnessed from first to last, water, petroleum, and coal gas being particularly observed. No little interest was created by the parties passing over the top of a generator, the latter being at a temperature considerably above the point of oxidation of leather.

The summer school of Course III., which on alternate years takes up the study of mining and of metallurgy, is this year to consider the metallurgy of various metals. The course will last about three weeks, and will be substantially as follows: To Syracuse, N. Y., to study coaking and the manufacture of soda; to Buffalo, N. Y., for the metallurgy of copper and of iron; to Niagara Falls, for electric metallurgy; to Cleveland, Ohio, for the metallurgy of iron, steel, nickel, and of copper, and the manufacture of sulphuric acid and common salt. The start will be made not later than June 9, and the school will be in charge of Professor Hofman.

Class Championship Games.

THE annual outdoor class games were held on Holmes's Field, Cambridge, last Saturday, the Harvard Athletic Association having very courteously tendered us the use of the grounds.

On account of the cold, raw weather, the number of spectators was small, but at times the students worked themselves up to a point of enthusiasm. Notwithstanding the weather, the records made were very encouraging.

There were two records broken, H. B. Mayhew, 1900, making a new mark of 11 min. 16 $\frac{4}{5}$ sec., for the two-mile run, and H. W. Jones, '98, putting the shot 37 ft. 8 $\frac{3}{4}$ in., increasing his old record by 7 $\frac{1}{4}$ in. Grosvenor equalled the 100-yard dash record of 10 $\frac{2}{5}$ sec. Ben Hurd made his first appearance for two years, capturing the high hurdles and taking second in the low. Stebbins distinguished himself by winning the quarter in 52 $\frac{4}{5}$ sec., and the half in 2 min. 6 $\frac{4}{5}$ sec. He also won the low hurdles in rather slow time.

The bicycle race was guesswork until the finish, a Freshman, Edson, leaving the field yards behind on the sprint for the tape. The time was fairly good, 5 min. 44 $\frac{2}{5}$ sec. Hooker ran a good race in the mile, winning in 4 min. 48 $\frac{2}{5}$ sec. Grosvenor, '98, Stebbins, '97, and Jones, '98, each won 15 points.

The Class of '98 won the championship for the year, with a total of 111 points. This breaks all previous records, as no class has ever before scored over one hundred points.

Following is the summary:—

100-YARD DASH.

Grosvenor, '98, 1st; Dryer, '99, 2d; Wentworth, 1900, 3d. Time, 10 $\frac{3}{8}$ seconds.

220-YARD DASH.

Grosvenor, '98, 1st; Hall, 1900, 2d; Sawyer, '99, 3d. Time, 23 $\frac{5}{8}$ seconds.

440-YARD RUN.

Stebbins, '97, 1st; Priest, '99, 2d; Emery, 1900, 3d. Time, 52 $\frac{1}{2}$ seconds.

880-YARD RUN.

Stebbins, '97, 1st; Morse, '99, 2d; Angus, 1900, 3d. Time, 2 minutes 6 $\frac{1}{2}$ seconds.

MILE RUN.

Hooker, '98, 1st; Bodwell, '98, 2d; Ritchie, '97, 3d. Time, 4 minutes 48 $\frac{3}{4}$ seconds.

2-MILE RUN.

Mayhew, 1900, 1st; Campbell, '99, 2d; Gray, 1900, 3d. Time, 11 minutes 16 $\frac{1}{2}$ seconds. (Record.)

120-YARD HURDLES.

Hurd, '97, 1st; Ferguson, '99, 2d; Wentworth, 1900, 3d. Time, 17 $\frac{1}{2}$ seconds.

220-YARD HURDLES.

Stebbins, '97, 1st; Hurd, '97, 2d; Putnam, '98, 3d. Time, 28 $\frac{3}{4}$ seconds.

TWO-MILE BICYCLE.

Edson, 1900, 1st; Gurney, '99, 2d; du Pont, '97, 3d. Time, 5 minutes 44 $\frac{1}{2}$ seconds.

PUTTING 16-LB. SHOT.

Jones, '98, 1st, 37 ft. 8 $\frac{3}{4}$ in. (Record); Schmidt, '99, 2d, 36 ft. 10 in.; Kimball, '99, 3d, 36 ft. 2 in.

THROWING 16-LB. HAMMER.

Jones, '98, 1st, 92 ft. 4 $\frac{1}{2}$ in.; T. Washburn, '97, 2d, 78 ft. 6 in.; Slocum, '99, 3d, 77 ft. 4 $\frac{1}{2}$ in.

RUNNING BROAD JUMP.

Grosvenor, '98, 1st, 20 ft. 1 $\frac{1}{2}$ in.; Butcher, '98, 2d, 19 ft. 11 in.; Everett, '98, 3d, 18 ft. 11 in.

RUNNING HIGH JUMP.

Putnam, '98, 1st, 5 ft. 7 in.; Butcher, '98, 2d, 5 ft. 6 $\frac{1}{2}$ in.; Ferguson, '99, 3d, 5 ft. 5 $\frac{1}{2}$ in.

POLE VAULT.

Putnam, '98, 1st, 8 ft. 11 $\frac{1}{2}$ in.; Kimball, '99, 2d; Nolte, '98, 3d.

DISCUS THROW.

Jones, '98, 1st, 80 ft. 8 in.; Copp, '99, 2d; Harris, '98, 3d.



'75. William H. Shockley, Course III., is at present traveling in China on business. Address, Bridgewater, Mass.

'86. We regret to announce the death of Theodore R. Foster at his home in Charlestown on April 15th. For the past three or four years the late Mr. Foster was employed as Master Mechanic of the C. B. & Q. Railroad, with headquarters at Denver, Col. Since his connection with railroad work he has seen several of the Western roads through struggles of vital importance to their existence. Three months ago Mr. Foster was taken ill with fever at Denver, and was soon brought to his home in Charlestown by his brother. In his death the West has lost one of her most able engineers.

'91. Geo. W. Bryden, Course II., has accepted a position as Engineer for the Meguin & James Co. of Portland, Me. The M. & J. Co. are general iron contractors, and take charge of architectural and structural iron work, etc.

'93. W. S. Hutchinson, Course III., has accepted a position in the employment of the American Developing and Mining Co. as Superintendent of the plant at Gibbonsville, Idaho. William Foster, '72, is General Manager of the company.

'94. Leon K. Davis, Course X., has recently become connected with Fairchild & Shelton of Bridgeport, Conn., as Chemist, in charge of a glycerine plant.

'96. James B. Henderson, Course II., has lately secured a position in the Engineering Department of the Metropolitan Water Board, and is at present employed at Northboro, Mass.

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The correct actual time of Campbell, '99, in the Hare and Hound run was, instead of 1 hour 9 minutes 30 $\frac{2}{5}$ seconds, as printed in last week's TECH, 1 hour, 2 minutes 30 $\frac{2}{5}$ seconds.

Nineteen Hundred defeated Dorchester High on Towne Field on Thursday. But five innings were played. Score, 10 to 6. Five runs were made off Rabbeth in the first inning. Woodward pitched the rest of the game, and had but one run made off him.

Ninety-nine has now a record of five consecutive victories, the last being the defeat of the Bridgewater Normal School on Saturday by 14 to 4. Sherrill pitched a good game, and was well supported by Holabird behind the bat. Hinman also put up a good game on the third for '99.

Nineteen Hundred plays the Harvard Freshmen next Monday. If the team does not go to pieces during the game, it ought to give Harvard a close rub. Both teams are heavy batters, but the odds are a little in favor of Harvard's stick work, while '00 will have to depend on consistent all-round play to carry the day.

The '99 Baseball Team defeated Groton School on April 28th at Groton by a score of 12 to 10. The visitors were treated with such courtesy that it is safe to say that every '99 man came home with the feeling that he had just played the pleasantest game of the season. Ninety-nine's fielding was still loose, but the batting was good, and the work of the battery excellent.

The game on Thursday between '99 and Tufts' second nine resulted in a score of 14

to 13 in favor of '99. Tufts had secured a lead of six runs early in the game through their opponents' ragged play, when '99 braced up in its work in the field, and eventually won by heavy batting. Moore's two long throws from third base to first in the seventh inning were the features of the game. Keys and Sherrill pitched.

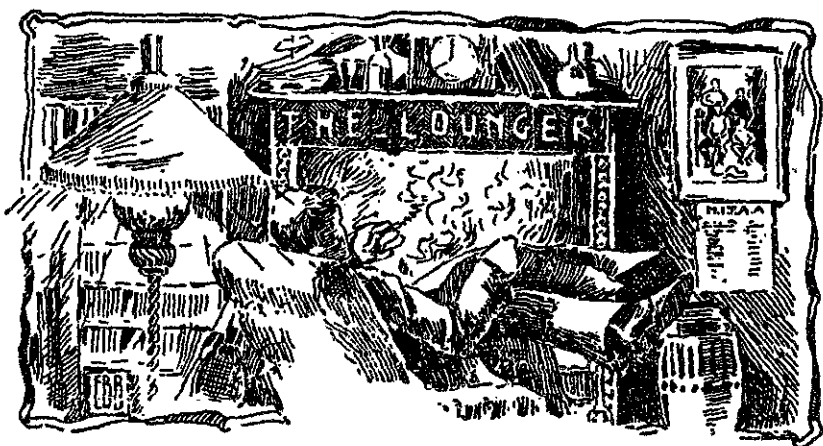
Nineteen Hundred defeated the Brown Freshmen on Lincoln Field last Saturday in a ten-inning game by a score of 15 to 11. Except in the third inning, '00 outplayed Brown in every way. In the third, '00's in-field went to pieces, and Brown made eight runs. Cotting took Whitehouse's place in the box in the next inning, and the team pulled itself together and played good ball for the rest of the game. The best work was done by Captain Woodward as catcher, and by Osgood on second. Stewart led in the batting with four hits, including a home run with two men on bases.

The Beaux Arts Competition.

FOR the third time our men have gained the highest academic honors in architectural competition in this country by winning the gold medal offered by the Beaux Arts Club of New York. The medal which last year was gained for the Institute by A. H. Spahr, this year Russell W. Porter won. His design of an elaborate mansion for the Governor of a state was the unanimous choice of the committee.

The Institute also gained the highest award in the Junior Problem, "A City Market," by Edwin L. Holmes. Not content with the first honors in the Senior and Junior problems, as usual each competitor from the Institute obtained a mention; Mr. R. C. Henry in the Senior Problem, and Mr. Cummings, '96, and Miss Ada Ryan, in the Junior Problem.

All the drawings, those by the other architectural colleges and clubs, as well as our own, will be on exhibition in the Architectural Building next week.



PESSIMISM aggravates the Lounger extremely; and he wishes to enter a vigorous protest against the limp talk of certain men, Seniors, who are old enough to know better. "There is no college life at Technology," we are told, "it is all a matter of business. The students are here just for the cash value they get out of it. There is no love for class or college, and nothing pleasant to look back upon. I shall be glad when I'm out." Now this is either contemptibly giving way to a temporary fit of the blues or it is a silly affectation. Technology men are not demonstrative about their loyalty any more than about anything else. But while the Lounger has had some knowledge of American college life he does not believe that anywhere there is more earnest, quiet, public-spirited work done, without fuss and feathers, than here at Technology. Of course it is largely done by a few men; but so is public work done in all colleges, and in the world outside, by a few men. Let us give due honor to those who, by various circumstances, are thus enabled especially to serve their college. And let these men themselves never forget, as they are too prone to do, that the great mass of students appreciate their work and are behind them with will and with heart in everything they do.

It is quite conceivable that a Freshman just defeated for some office might take up the pose indicated above. But can any Senior sincerely say that his career at Technology is not very precious to him? Is there a man who, in the four most impressionable years of his life, has not made friends as dear to him as brothers? Is there one who has not grown to love what he has worked for, be it an athletic team, or a local society, or the "Technique," or THE TECH? Who has not present with him the picture of some special half-hour's talk with a chosen college friend when the barriers of reserve were broken down, and each spoke perhaps of his dearest motives and ambitions? Who cannot

recall merry luncheons at the Elm when Roquefort and Pilsener made joint attack upon the digestion, after-the-theater rare-bits at the Adams House, select gatherings in the little upstairs dining room at Young's? Who does not think with some pleasure of afternoons spent on the Oval or at the South End Grounds, when perhaps the shoulder-to-shoulder feeling that college men should have is most developed. (The Lounger intends no sly reference to the "shoulder-to-shoulder feeling" of the Freshmen in the cane rush.) What man is there at Technology the very walls of whose room do not testify to a thousand precious memories? Are there not shop-signs significant of early Freshman days, bits of torn banners and old sweaters from the cane-rush, shingles and group photographs, each face in which is endeared by familiar intercourse? Are there not crossed spoons with the imprint of many a famous hostel, menus, and play-bills, each with a special story? Are there not athletic trophies, cups and medals, along the mantel-shelf? Does not a red and gray gown conjure up the carnival evening of the last Republican parade, and a torn cap perhaps the rush with Harvard on election night? No, no, friends of '97; your would-be cynical pessimism is all a pose. When your degree is handed to you, and you look round for the last time on the faces you will never see all together again, there will be a griping at your heart, and you will begin to laugh and joke in feverish manner with your neighbor, to hide a little breaking in your voice.

As the Lounger entered THE TECH office some days since he was the witness of an touching scene. A member of the Board was saying in a tone of affected firmness, covering deep emotion, "Yes, my dear friends, I must say farewell. You have been faithful to me in all my trials. You have comforted me in many an hour of depression. But now duty and honor call me and I must bid you a long farewell. Go and be as great a solace to another as you have been to me." And the Sporting Editor gave all his pipes to the janitor, for he was going into strict training for Worcester.

The Lounger has always heretofore had a high respect for the Geological Course. Recently, however, the announcement of a lecture on "Joints," shocked him deeply. As usual, he presumes that parties will be conducted to points of interest in connection with the subject by the brothers Grabau.

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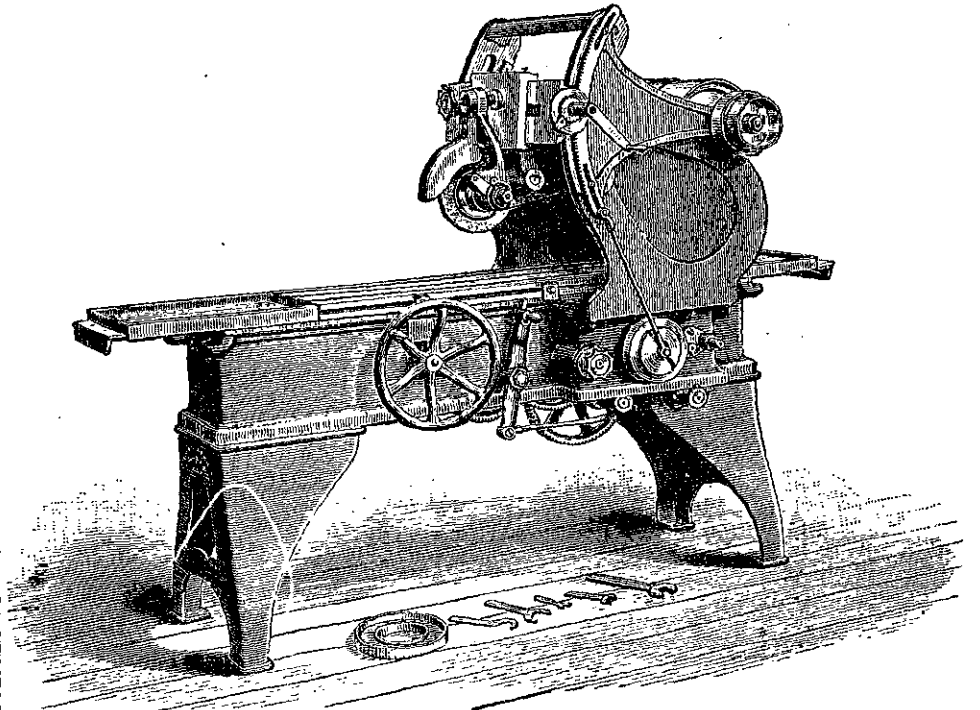
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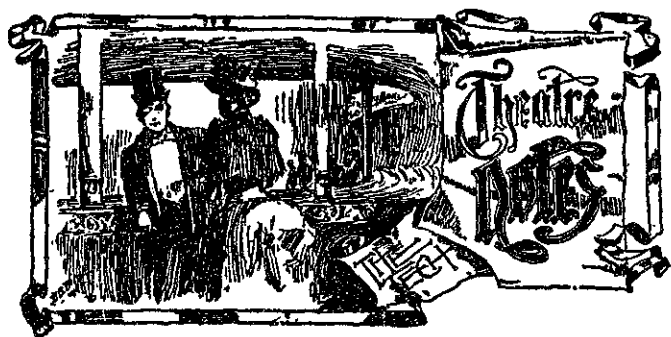
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Hollis Street Theatre.—Last week of Miss Ada Rehan's engagement. Miss Rehan will give this week Monday "As You Like It," Tuesday, Wednesday, Thursday and Friday evenings, and Wednesday and Saturday matinees "Tempest," and Saturday "The Magistrate." Miss Rehan is

supported by an admirable company, among whom are Charles J. Richman.

The Tremont Theatre.—Mr. Richard Mansfield, supported by Miss Beatrice Cameron, will appear for one week. The repertory will be Monday evening and Wednesday matinee, "Arms and the Man;" Tuesday, "Parisian Romance;" Wednesday evening and Saturday matinee, "Prince Karl;" Thursday, "Scarlet Letter;" Friday, "Beau Brummel," and Saturday "Dr. Jekyll and Mr. Hyde."

Castle Square Theatre.—The new venture at the Castle Square has proved to be a great success, and gives promise of continuing. The stock company is made up of well-known and thorough artists, who all do much toward pleasing their audiences. This week they will give Augustin Daly's "Lottery of Love," with "Her Last Rehearsal" as a curtain-raiser."

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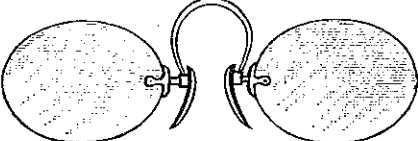
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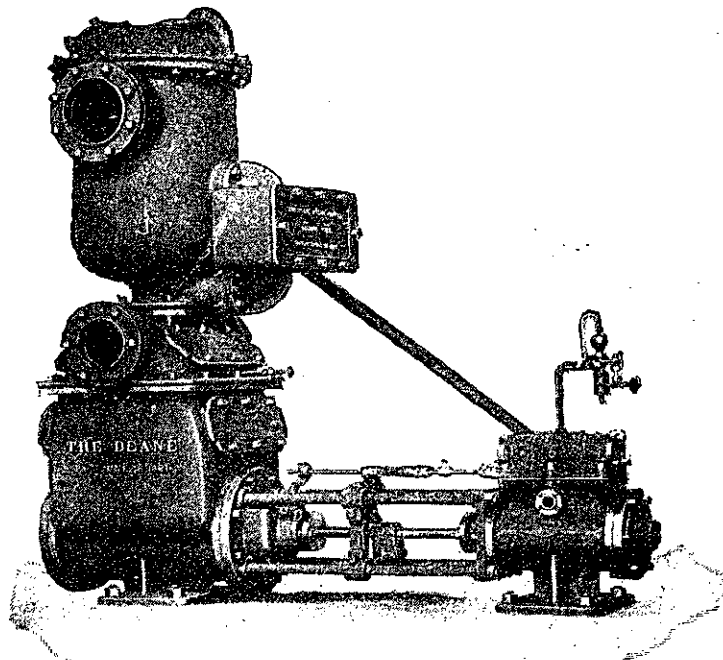
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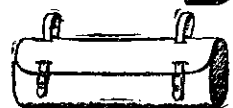
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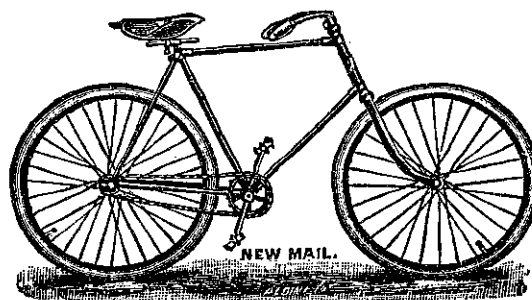
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